

US5471193:Tamper-resistant vehicle event recorder

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Field of Search:

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Abstract:

A tamper-resistant vehicle event recorder having a combustible film on a polymeric substrate, an ignition mechanism for igniting the combustible coating and an activation mechanism connected to the ignition mechanism for activating the ignition mechanism in response to a vehicular event.

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What is claimed is:

1. A temper-resistant vehicle event recorder comprising:

- (a) a polymeric substrate;
- (b) a combustible fuel coating on said polymeric substrate;
- (c) an igniter for igniting said combustible fuel coating; and
- (d) activation means connected to said igniter for activating the igniter in response to a vehicular event.

Background/Summary:

FIELD OF THE INVENTION

The present invention relates to devices for permanently recording the occurrence of an event occurring in a vehicle.

BACKGROUND ART

Automobiles and other vehicles include complex safety systems such as air-bags as well as traditional instrumentation such as odometers. In general it is desirable to have an unambiguous and tamper proof or tamper resistant indication that a certain vehicle event has occurred. For example it is desirable to indicate that the air-bag has been deployed since this indicates that the vehicular chassis has been involved in a collision. In a similar fashion it is desirable to indicate that the odometer has logged a preset mileage interval or intervals such as 10,000 miles, for warrantee verification and the like.

At present there are no generally available, permanent and tamper proof devices to record and display the occurrence of such events.

SUMMARY OF THE INVENTION

The tamper-resistant vehicle event recorder of the present invention is electrically activated and generates a non-reversible physical change to a plastic substrate. This marker is displayed to the vehicle operator. In general the recorder includes a plastic substrate layer which will normally form part of a vehicle structure such as the dashboard or the like. A metallic igniter is formed on the substrate. A combustible material is layered onto the metallic igniter. In operation the vehicular event results in the passage of current through the recorder which heats up the igniter and causes the combustible material to ignite. The heat released by combustion causes a permanent deformation of the plastic substrate or a visible change in the substrate, or preferably both a mechanical deformation and visible change together.